

6061 .500 X .658

Work Order ID 85453

85453

Page 1

June-08-12 10:00:56 AM

Item ID: / D4202-1

Accept

N9000040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Spacer

Start Date: 08/06/2012 Start Qty: 400.00

400

Cust Item ID:

Required Date: 22/06/2012 Req'd Qty: 400.00

400

Customer:

Reference:

Approvals:

Process Plan: MLJ

Date: 12/06/08 Tooling:

Date:

Run Start *NR1*

QC:

Date: SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D4202

C

100

0.00

100

Hardinge

Hardinge CNC LATHE SMALL

Memo

0.00

Hardinge CNC Lathe Small

1- Machine as per Folio FB015

FOLIO REV: AA

DWG REV: C

2- Deburr

110

0.00

110

QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

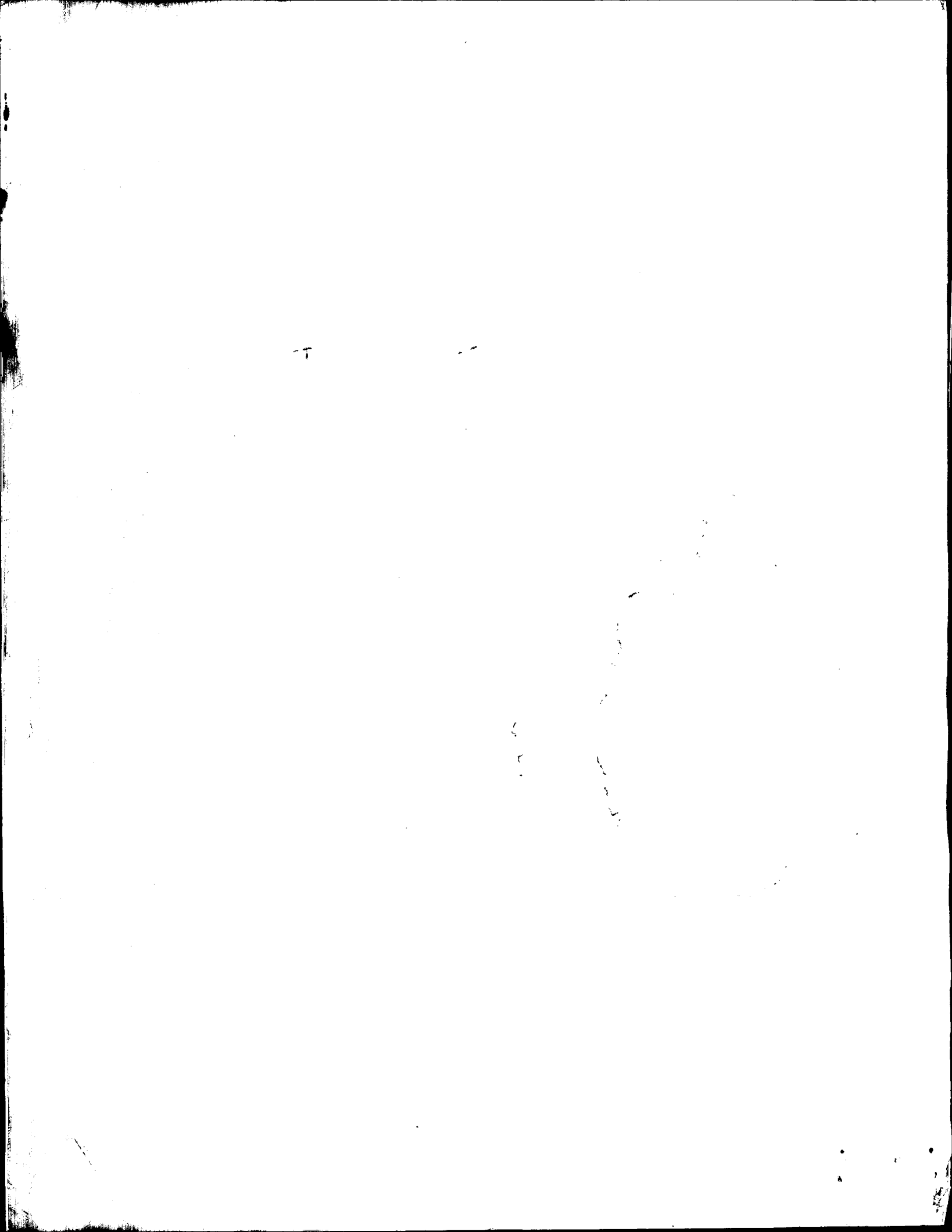
0.00

DAS
13
9-89
12/07/23

401

DAS
13
9-89
12/07/23

401



Work Order ID 85453

85453

Page 2

June-08-12 10:00:56 AM

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N9000040100

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC8- Inspect parts - second check	0.00							
120									
QC	Memo	0.00							
Quality Control									
130	Outsource process - Heat Treat	0.00							
130									
Outsource1	Memo	0.00							
Outsource process - Heat Treat	***HEAT TREAT AS PER DWG D4202***								
140	Receive & Inspect for Damage & Mat'l Certs	0.00							
140									
Packaging	Memo	0.00							
Packaging									

2-7-24

401

PO 17528

BL 12-07-24
1100

Calista 1100

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube <input type="checkbox"/></td> <td style="width:15%;">Crosstube <input type="checkbox"/></td> <td style="width:15%;">Prod. Eng. Coord. <input type="checkbox"/></td> <td style="width:15%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> <td></td> </tr> </table>						Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Supplier <input type="checkbox"/>		Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Other <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Engineering <input type="checkbox"/>																								
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Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Supplier <input type="checkbox"/>																									
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Other <input type="checkbox"/>																									
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector																		
Doc/Data <input type="checkbox"/>																											
Equip/Tooling <input type="checkbox"/>																											
Operator <input type="checkbox"/>																											
Material <input type="checkbox"/>																											
Offset/Setup <input type="checkbox"/>																											
Other <input type="checkbox"/>																											
Process <input type="checkbox"/>																											
Supplier <input type="checkbox"/>																											
Training <input type="checkbox"/>																											
Unauthorized <input type="checkbox"/>																											

FAULT CATEGORY				
Landing Gear <input type="checkbox"/> Bending Passes Below Min <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimp at Bending <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Other <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Ripples on Inner Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	Hardware <input type="checkbox"/> Breaking <input type="checkbox"/> Missing <input type="checkbox"/> Size/Length <input type="checkbox"/> Spinning <input type="checkbox"/> Threading <input type="checkbox"/> Wrong Drill Holes <input type="checkbox"/> Misaligned <input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Undersized <input type="checkbox"/> Too Many	General <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Documentation/Data <input type="checkbox"/> Finish <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Inspection Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Jigs/Fixtures/Tooling <input type="checkbox"/> Kit Incorrect <input type="checkbox"/> Kit Missing	<input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Off-Set <input type="checkbox"/> Orientation Misread <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Lost <input type="checkbox"/> Part Moved <input type="checkbox"/> Raw Material	<input type="checkbox"/> Set-up <input type="checkbox"/> Supplier <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

Work Order ID 85453

85453

Page 3

June-08-12 10:00:56 AM

Item ID: D4202-1

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Spacer

Start Date: 08/06/2012 Start Qty: 400.00

400

Cust Item ID:

Required Date: 22/06/2012 Req'd Qty: 400.00

400

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

150

QC6- Inspect dimensions to drawing

0.00

150

QC

Memo

0.00

DAS 15 2-89 12/08/12

401

Quality Control

190

Identify as per dwg & Stock Location: 69

0.00

190

Packaging

Memo

0.00

Packaging

STOCK IN SKIDTUBE CELL

401 CF 12-8-21

200

QC21- Final Inspection - Work Order Release

0.00

200

QC

Memo

0.00

Quality Control

MCJ 12/08/21
MCJ 12/08/21

Picklist Print

June-08-12 10:01:00 AM

Page 1

Work Order ID: 85453

85453

Parent Item: D4202-1

D4202-1

Parent Item Name: Spacer

Start Date: 08/06/2012

Required Date: 22/06/2012

Start Qty: 400.00

Required Qty: 400.00

Comments: IPP REV:A NEW ISSUE 10-12-07 JLM VERIFIED:DD IPP
REV:B AS PER REV B 11-04-05 JLM VERIFIED BY:DD IPP Rev:C
11.12.19 PER DWG REV.C DD ver:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M6061T6T0.500W.058

Purchased

No

100

f

214.3730

0.35

147.3684

**

13

2-89

1217/24

M6061T6T0 500W 058

6061-T6 RD Tube .500 x.058W

Location

Loc Qty

Loc Code

MAT014

214.373

117084

23.242

117890

0.1

119160

1.914

120935

189.117

122312

122051

148'

10'

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> Other <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> </div> </div>					
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Equip/Tooling											
Operator											
Material											
Offset/Setup											
Other											
Process											
Supplier											
Training											
Unauthorized											

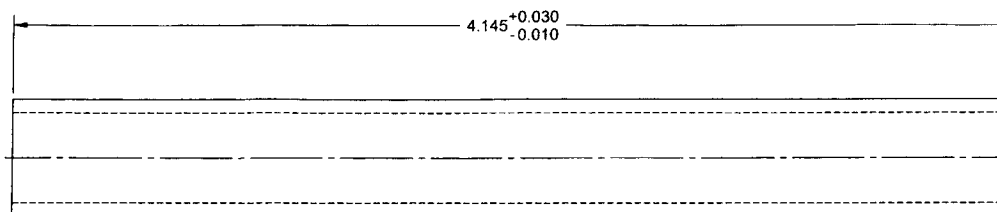
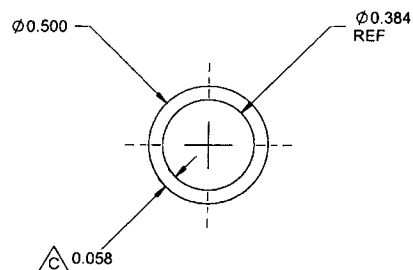
FAULT CATEGORY				
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SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT

WITHOUT NOTICE
WORK ORDER

NO. 85453 MLJ

12/06/08



D4202-1 SPACER

RELEASED
2011-12-14

- NOTES:**
- 1) MATERIAL: 6061-T4/-T42 ALUMINUM TUBING PER WW-T-700/6, AMS 4081, OR ASTM B210 / B221 / B241
REF DART SPEC M6061T4T0.500W.058
OR
6061-T6/-T62 ALUMINUM TUBING PER WW-T-700/6, QQ-A-200/8, QQ-A-225/8, AMS 4080 / 4082, OR ASTM B210 / B221 / B241
REF DART SPEC M6061T6T0.500W.58
HEAT TREAT TO -T4/-T42 CONDITION. MIN UTS = 30 KSI (60 HREW MIN)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 0.03 lbs

C	6061-T4 WAS 6061-T6, 0.058 WAS 0.049	CP	11.12.13
B	0.049 WAS 0.058. REASON: FACILITATE MFG	MB	11.03.22
A	NEW ISSUE	CP	10.09.22
REV.	DESCRIPTION	BY	DATE
DESIGN	JP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	JP		
CHECKED	ALS	DRAWING NO.	REV. C
MFG. APPR.	JP	D4202	SHEET 1 OF 1
APPROVED	JP	TITLE	SCALE
DE APPR.	JP	SPACER	NTS
DATE	11.12.13	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO17528**

Purchase Order Date 7/24/2012

PO Print Date 7/24/2012

Page Number 1 of 1

Order From :

VC-MET004

METCOR INC.
560 BOUL. ARTHUR SAUVE
SAINT-EUSTACHE, QC J7R 5A8
CA

Contact Name

Vendor Phone

450 473 1884

Vendor Fax

450 491 5498

Vendor Account Nbr

Buyer

Brigitte Golden

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	85453	D4202-1 Spacer	7/31/2012 Yes	400.00	FedEx PI collect	\$0.9900	\$396.00
			Special Inst: Heat Treat to condition T4 As per DWG: D4202				
2	87948	D4202-1 Spacer	7/31/2012 Yes	500.00	FedEx PI collect	\$0.9900	\$495.00
			Special Inst: Heat Treat to condition T4 As per DWG D4202				

PO Total:

\$891.00

Change Nbr: 2

Change Date: 7/24/2012

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required - YES NO

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ
ST-EUSTACHE, QC J7R 5A8
Tel: 450-473-1884 / Fax: 450-491-5498

Recu de Livraison

Order	Shipper	Shipping Seq.
177983	1	63103

Shipped Complete

Customer **215**

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053

Shipped To:

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053

Purchase Order Number	Customer Shipper No.	Material Type	Order Date	Carrier
PO17528		AL-6061	2012/7/25	FEDEX

Quantity	Part No. / Part Name / Part Description	Pounds
----------	-----------------------------------------	--------

900 D4202-1 29,

(400) SPACER
REFERENCE 85453

(500) D4202-1 SPACER
REFERENCE 87948
HEAT TREAT TO CONDITION T4
AS PER DWG: D4202

CONTENANT: 2 BOÎTES DE CARTON

Container Type	# Of Containers	Container Comments
BOITE DE CARTON	2	

CERTIFICAT

PACKING	
----------------	--

Quantity Shipped: 900

Pounds Shipped: 29,00

Quantity Remaining: 0

Pounds Remaining: 0,00

CERTIFICAT

Quantity Shipped: 900

Pounds Shipped: 29,00

Signature:

Date:

Shipped ON: 2012/07/31



Metcor Inc.
560, boul. Arthur-Sauvé
St-Eustache (Québec) J7R 5A8
Tél. : 450 473-1884
Télécopieur / Fax administration : 450 491-5498
Télécopieur / Fax production : 450 491-6454

Certificat de Conformité
Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
177983	1

CLIENT / customer 215
DART AEROSPACE
1270 ABERDEEN
HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:
DART AEROSPACE
1270 ABERDEEN
HAWKESBURY

ON K6A 1K7

COMMANDE DU CLIENT customer po	BON DE LIVRAISON DU CLIENT customer shipper no.	MATÉRIEL material	CODE DE TRAITEMENT mat'l heat code	NUMÉRO DE LOT lot number
PO17528		AL-6061		

SPÉCIFICATIONS DU PROCÉDÉ
processing specifications

SOL ANNEAL

SINGLE AGING TO CONDITION T42

□

DAS
16
9-89 17/06/07

XIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
CONDUCTIVITY	35 - 43 %IACS	20	38 - 39 %IACS
HARDNESS	60 HREW MIN	20	67.5 - 70 HREW

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
900	29	D4202-1 (400) SPACER REFERENCE 85453 (500) D4202-1 SPACER REFERENCE 87948 HEAT TREAT TO CONDITION T4 AS PER DWG: D4202 CONTENANT: 2 BOÎTES DE CARTON

COMMENTAIRES / comments

CERTIFIÉ par / Certified by:

[Signature]



DATE: 2012-07-30